

WHAT IS CLAIMED IS:

1. A power selection system for use with a reconfigurable circuit, comprising:

a monitoring circuit configured to monitor an operating characteristic associated with at least one node located within said reconfigurable circuit; and

a mode selection circuit coupled to said monitoring circuit and configured to select one of:

a normal power mode when said operating characteristic falls within a predetermined operating range of said reconfigurable circuit, and

an alternative power mode when said operating characteristic falls outside of said predetermined operating range of said reconfigurable circuit.

2. The power selection system as recited in Claim 1 wherein said monitoring circuit comprises a switching counter configured to monitor a number of switching transitions associated with said at least one node located within said reconfigurable circuit.

3. The power selection system as recited in Claim 2 wherein  
2 said predetermined operating range comprises a threshold number of  
3 switching transitions.

4. The power selection system as recited in Claim 3 wherein  
2 said mode selection circuit is configured to select one of:

3 said normal power mode when said number of switching  
4 transitions is less than or equal to said threshold number of  
5 switching transitions, and

6 said alternative power mode when said number of switching  
7 transitions is greater than said threshold number of switching  
8 transitions.

5. The power selection system as recited in Claim 1 further  
2 comprising a timing counter configured to track a period of  
3 operation of said reconfigurable circuit.

6. The power selection system as recited in Claim 1 wherein  
2 said alternative power mode is a low power mode.

7. The power selection system as recited in Claim 1 wherein  
2 said reconfigurable circuit comprises a Pseudo Random Binary  
3 Sequence (PRBS) generator.

8. A method of operating a reconfigurable circuit,  
comprising:

monitoring an operating characteristic associated with at  
least one node located within said reconfigurable circuit; and  
selecting one of:

a normal power mode when said operating characteristic  
falls within a predetermined operating range of said  
reconfigurable circuit, and

an alternative power mode when said operating  
characteristic falls outside of said predetermined operating  
range of said reconfigurable circuit.

9. The method as recited in Claim 8 wherein said monitoring  
comprises monitoring a number of switching transitions associated  
with said at least one node located within said reconfigurable  
circuit.

10. The method as recited in Claim 9 wherein said  
predetermined operating range comprises a threshold number of  
switching transitions.

11. The method as recited in Claim 10 wherein said selecting  
2 comprises selecting one of:

3       said normal power mode when said number of switching  
4 transitions is less than or equal to said threshold number of  
5 switching transitions, and

6       said alternative power mode when said number of switching  
7 transitions is greater than said threshold number of switching  
8 transitions.

12. The method as recited in Claim 8 further comprising  
2 tracking a period of operation of said reconfigurable circuit.

13. The method as recited in Claim 8 wherein said  
2 reconfigurable circuit comprises a Pseudo Random Binary Sequence  
3 (PRBS) generator.

14. A reconfigurable circuit, comprising:

a monitored sub-circuit, including:

a delay element, associated with a node of said reconfigurable circuit, having a switch;

a multiplier interposed between said node and an output of said reconfigurable circuit; and

a power selection system, including:

a monitoring circuit that monitors an operating characteristic associated with said node, and

a mode selection circuit, coupled to said monitoring circuit, that selects one of:

a normal power mode when said operating characteristic falls within a predetermined operating range of said reconfigurable circuit, and

an alternative power mode when said operating characteristic falls outside of said predetermined operating range of said reconfigurable circuit.

15. The reconfigurable circuit as recited in Claim 14 wherein  
2 said monitored sub-circuit comprises a plurality of delay elements,  
3 associated with a respective node of said reconfigurable circuit,  
4 having a corresponding switch and a plurality of multipliers  
5 interposed between said one of said nodes and said output of said  
6 reconfigurable circuit, said monitoring circuit monitoring an  
7 operating characteristic associated with at least one of said  
8 nodes.

16. The reconfigurable circuit as recited in Claim 14 wherein  
2 said monitoring circuit comprises a switching counter that monitors  
3 a number of switching transitions associated with said switch  
4 associated with said node.

17. The reconfigurable circuit as recited in Claim 16 wherein  
2 said predetermined operating range comprises a threshold number of  
3 switching transitions.

18. The reconfigurable circuit as recited in Claim 17 wherein

said mode selection circuit selects one of:

said normal power mode when said number of switching transitions is less than or equal to said threshold number of switching transitions, and

said alternative power mode when said number of switching transitions is greater than said threshold number of switching transitions.

19. The reconfigurable circuit as recited in Claim 14 wherein said power selection system further comprises a timing counter that tracks a period of operation of said monitored sub-circuit.

20. The reconfigurable circuit as recited in Claim 14 wherein said monitored sub-circuit is selected from the group consisting of:

a Pseudo Random Binary Sequence (PRBS) generator, and  
a filter circuit.